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## Side Effect: Peek at U.S. Intelligence Admines

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WASHINGTON, Sept. 1 — When Secretary of State George P. Shultz disclosed details today of the shooting down of a Korean Air Lines Boeing 747, he provided an unusually revealing glimpse of modern intelligence technology's ability to track the movements of Soviet pilots and to intercept their messages.

By the time Mr. Shultz appeared in the State Department's press room to report the destruction of the jetliner and the apparent death of 269 passengers and crew members, American and allied intelligence services had pieced together enough bits of information to plot the route of the plane, determine how long Soviet military personnel had tracked it, identify the plane's altitude and pinpoint the time the pilot fired his missile.

American intelligence officials are reluctant to discuss the dimensions or the abilities of allied tracking techniques, but they acknowledge that, in an age of worldwide electronic eavesdropping and sophisticated surveillance satellites, few aircraft movements and military communications go undetected.

The tracking is done through a network that, according to Maj. Gen. George J. Keegan Jr., retired, the former chief of Air Force intelligence, provides the West with "detailed knowledge of the volume, kind and intensity of Soviet signals."

This network permits experts to reconstruct an incident in the skies through radar emissions, recording techniques and other means, and it yielded the details of the shooting down of the Korean jetliner.

"The pilot was in constant communication with his ground control, describing and discussing a sequence of movements he was taking to engage, including the arming and firing of the missile," Richard Burt, Assistant Secretary of State for European Affairs, said.

Mr. Burt said American officials did not have "real-time information," meaning that intelligence personnel were not listening to the conversations involving the Soviet aircraft at the time the incident occurred. He said the information, which had to be retrieved and translated, was "not just U.S. technical information." Intelligence experts said that Korean and Japanese authorities have more concentrated intelligence efforts in regions abutting their territory than does the United States.

These experts said that this week's incident came against the backdrop of an aggressive American effort to develop technical intelligence penetration of the Sea of Okhotsk over more than 30 years and after more than a score of such incidents, many of them recorded in considerable detail or reconstructed by American or allied intelligence officials.

The United States surveillance of Soviet activities in the area rests on a Communications Security Group based in northern Hokkaido.

The construction of a worldwide electronic intelligence network was one of the United States' military priorities in the postwar years, and as long as a quarter-century ago, according to a report prepared for the Joint Chiefs of Staff, the National Security Agency had as many as 4,120 intercept stations around the globe. Since then, with the

development of surveillance satellites, the ability of military intelligence to track aircraft movements and intercept messages has increased mayfold.

For the last three decades, military intelligence officials routinely have followed the passive radar emissions of both military and commercial aircraft, even on the ground, from as far as 19,000 miles away. There's no question of being able to reconstruct where the aircraft went from these intercepts," said an intelligence expert.

The United States, hoping to ascertain the extent of Soviet defenses in the region, deliberately planned flights there to elicit a Soviet response from the 1950's until recommaissance tasks were taken over by satellites, according to one intelligence expert. "We know the Soviets had orders to shoot down our aircraft, and they were always approved in Moscow," said the expert, who is familiar with accounts of Soviet air communications. He added that he had personal knowledge that "six colonels of air defense forces were shot" in the Soviet Far East "for failure to shoot down our aircraft."

The years of monitoring plane movements and military communications should have alerted Korean pilots to how sensitive the Soviet Union is to violations of its airspace, General Keecan said

"I have never failed to be surprised at how careless the Koreans are, despite the risks of flying near Soviet airspace," he said. "Despite all that the Soviets had there, the Koreans continued to fly too close. The Koreans continued to bruise the Soviets on this. What happened today they invited. They should have flown much farther away, over Japanese air space."